

CAMBRIA IRON COMPANY,

HAER No. PA-109-H

BLAST FURNACES NO. 5 & 6 BLOWING ENGINE HOUSE

(Bethlehem Steel Company, E & F Blast Furnaces Engine House)

Cambria Iron Works

Lower Works

Johnstown

Cambria County

Pennsylvania

HAER
PA
11-5070,
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

Historic American Engineering Record
National Park Service
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HISTORIC AMERICAN ENGINEERING RECORD

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(Bethlehem Steel Company, E & F Blast Furnace Engine House)
Cambria Iron Works

HAER No. PA-109-H

Location: Lower Works, Johnstown, Cambria
County, Pennsylvania

Quad: Johnstown, Pennsylvania

UTM: 17 E.676540 N.4466620

Date of Construction: ca 1873, 1898

Fabricator: unknown

Present Owner: Bethlehem Steel Corporation

Present Use: Abandoned

Significance: The original blowing engine house,
erected about 1873, comprises the
two southernmost bays of the
current Blast Furnace Engine House.
Importantly, the southern half of
the Engine House remains largely
unaltered from its 1870s
appearance. All of the machinery,
has been removed.

Historian: Gray Fitzsimons

Project Information:

The results of the study of Cambria County were published in 1990: Fitzsimons, Gray, editor, Blair County and Cambria County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites (Washington, D.C.: America's Industrial Heritage Project (AIHP) and HABS/HAER, National Park Service). The contents of the publication were transmitted to the Library of Congress as individual reports. Research notes, field photos and copies of historic photos collected during the project were transmitted to the AIHP Collection, Special Collections, Stapleton Library, Indiana University of Pennsylvania, Indiana, PA 15705.

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HISTORY

The entire building measures approximately 118' x 88'. The 1870s section contains common-bond brick walls and pilasters, wrought-iron, pin-connected Pratt roof trusses, and circular-arched door and window openings. The northern two-bay addition to the Engine House was probably constructed in the 1890s and features riveted steel Fink roof trusses, brick walls and pilasters, as well as flat-arched window openings.

The early and mid-1870s witnessed increasing rail production at the Cambria Iron Company. To expand its pig iron capacity, the company added two coke-fired blast furnaces adjacent to its giant rolling mill. Construction of Blast Furnace No. 5 commenced in 1873, though it was not put into blast until 1876. About six years later Cambria Iron completed Blast Furnace No. 6. The two furnaces produced 600 tons of Bessemer iron per week. Each furnace was provided with steam by cylinder boilers housed in adjacent boiler houses. The Hot Blast Engine House contained three blowing engines manufactured by the Southwark Foundry and Machine Company of Philadelphia.

The blast furnace operation at No. 5 and No. 6 remained relatively unchanged until about 1900, when the newly reorganized Cambria Steel Company upgraded this site. New boiler houses were erected to the south and north of the blast furnaces, and one of the original boiler houses was demolished. A major change to the Engine House occurred in 1918 when the Midvale Steel and Ordnance Company replaced the original blowing engines with three Mesta horizontal engines. Soon after Bethlehem Steel acquired the works of the old Cambria Iron Company, Blast Furnace No. 5 was torn down and replaced with a new furnace, cast house, and electric skip hoist. The Engine House continued in service through the 1950s with Furnace No. 5 producing ferro-manganese. Even after the construction of a turbo-blower building in 1961, the original Engine House and Blower House were retained as backup facilities. The last blow at Furnace No. 5 occurred in 1977. Nine years later Johnstown's only remaining blast furnace was torn down. Only the hot blast stoves (1930-34), the Skip House (1925), the gas Cleaning Plant (1931), the stock bins (1931), the Sintering Plant (1950s), the Turbo Blower Building (1961), and the Engine House remain in place.

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SOURCES

Bethlehem Steel Engineering Department, "History of the Evolution of the Johnstown Plant: Bethlehem Steel Company, 1852-1935; (revised 1958)," unpublished paper in the possession of the Bethlehem Steel Corporation, Engineering Division, Johnstown, pp. 38-39, 41, 47.

Holley, A.L. and Smith, Lenox, "American Iron and Steel Works: Works of the Cambria Iron Company," Engineering: An Illustrated Weekly Journal, Vol. 26, (12 July 1878): 21-4; (23 August 1878), 152-3.